

CLAIMS:

1. An automatic emergency response system operable to notify an emergency centre of a defined event and to facilitate location of the event, the system including
5 signal generating means to generate a signal incorporating information which enables location of the signal to be established, an alarm signal transmitter operable on occurrence of a defined event to transmit an alarm signal incorporating said signal to a receiving station which provides the emergency centre with information relating to the signal transmission, position determining means to establish its at least approximate
10 location, a homing signal transmitter which simultaneously transmits a homing signal either continuously or at periodic intervals, and actuating means to initiate the alarm transmitter and homing signal transmitter, the actuating means being initiated by any of the defined events.
- 15 2. The system according to claim 1 wherein the signal generating means generates a coded signal to be transmitted by the alarm signal transmitter.
3. The system according to claim 1 or claim 2 wherein the position determining means comprises a GPS unit that provides position information to the signal generating
20 means on a periodic basis.
4. A system according to claim 1 or claim 2 wherein the position determining means comprises satellites programmed to be able to detect the homing signals transmitted by the homing signal transmitter and to provide a relatively exact location
25 of the transmitter.
5. The system according to claim 1 or claim 2 wherein the position determining means comprises a cellular telephone system network.
- 30 6. The system according to any one of claims 1 to 5 wherein the defined events include detected accident conditions.
7. The system according to any one of claims 1 to 6 wherein the position determining means, the alarm signal transmitter, the beacon signal transmitter and
35 actuating means are mounted in a vehicle.

8. The system according to any one of claims 1 to 7 wherein an inbuilt battery is associated with the transmitters to provide power in the event the vehicle battery is disconnected or exhausted.
- 5 9. The system according to any one of claims 1 to 8 wherein the actuating means comprises one or more accelerometers, smoke detectors, motion detector, air-bag actuator, seat belt retractor, or manual switch.
- 10 10. The system according to any one of claims 1 to 9 wherein the alarm signal transmitted incorporates additional information including accident severity, vehicle identification, passenger numbers, vehicle attitude, and updated positional information if the vehicle is in motion.
- 15 11. The system according to any one of claims 1 to 10 wherein the homing signal transmission is a radio beacon signal transmitted at regular intervals.
12. The system according to any one of claims 1 to 11 wherein the radio beacon transmission includes GPS position location information.
- 20 13. The system according to any one of claims 1 to 12 wherein the homing signal transmitter includes a strobe or other bright pulsing light, or other periodic light source, or sound source, to attract attention.
- 25 14. The system according to any one of claims 1 to 13 wherein said signal generating means includes a control circuit operatively associated with the alarm signal transmitter and homing signal transmitter, the control circuit also monitoring battery charge and adjusts the frequency of transmission rates based on the monitored battery charge.
- 30 15. A system according to any one of the claims 1 to 14 wherein the alarm signal transmitter and homing signal transmitter are a single transmitter unit switched between operational modes as required.
- 35 16. An automatic emergency response system operable to notify an emergency centre of a defined event and to facilitate location of the event, the system including position determining means to establish its at least approximate location, code

generating means to generate a coded signal incorporating position location information, an alarm signal transmitter operable on occurrence of a defined event to transmit an alarm signal incorporating said coded signal to a receiving station which provides the emergency centre with information relating to the signal transmission, including the positional information relating to the location of the transmitter, a relative low power homing signal transmitter which simultaneously transmits a homing signal either continuously or at periodic intervals, and actuating means to initiate the alarm transmitter and homing signal transmitter, the actuating means being initiated by any of the defined events.

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17 The system according to claim 16 wherein the position determining means comprises a GPS unit that provides position information to the signal generating means on a periodic basis.

15 18. The system according to claim 16 wherein the position determining means comprises a cellular telephone system network.

19 The system according to any one of claims 16 to 18 wherein the defined events include detected accident conditions.

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20. The system according to any one of claims 16 to 19 wherein the position determining means, the alarm signal transmitter, the beacon signal transmitter and actuating means are mounted in a vehicle.

25 21. The system according to any one of claims 16 to 20 wherein an inbuilt battery is associated with the transmitters to provide power in the event the vehicle battery is disconnected or exhausted.

22. The system according to any one of claims 16 to 21 wherein the actuating means comprises one or more accelerometers, smoke detectors, motion detector, air-bag actuator, seat belt retractor, or manual switch.

23. The system according to any one of claims 16 to 22 wherein the coded alarm signal transmitted incorporates additional information including accident severity, vehicle identification, passenger numbers, vehicle attitude, and updated positional information if the vehicle is in motion.

24. The system according to any one of claims 16 to 23 wherein the homing signal transmission is a radio beacon signal transmitted at regular intervals.
25. The system according to any one of claims 16 to 24 wherein the radio beacon
5 transmission included GPS position location information.
26. The system according to any one of claims 16 to 25 wherein the homing signal transmitter includes a strobe or other bright pulsing light, or other periodic light source, or sound source, to attract attention.
- 10 27. The system according to any one of claims 16 to 26 wherein said code generating means includes a control circuit operatively associated with the alarm signal transmitter and homing signal transmitter, the control circuit also monitoring battery charge and adjusts the frequency of transmission rates based on the monitored battery
15 charge.
28. An automatic emergency response system operable to notify an emergency centre of a defined event and to facilitate location of the event substantially as hereinbefore described with reference to the accompanying drawings.